



# POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

|                        |                         |
|------------------------|-------------------------|
| Application Number     | 09/656,146              |
| Filing Date            | September 6, 2000       |
| First Named Inventor   | Beausoleil, W.F. et al. |
| Group Art Unit         | 2123                    |
| Examiner Name          | Not Yet Assigned        |
| Attorney Docket Number | 706316-1206             |

I hereby appoint:

☒ Practitioner at Customer Number

34313



34313

PATENT TRADEMARK OFFICE

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☐ Practitioner(s) named below:

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as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Technology Center 2100

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I am the:

☐ Applicant/Inventor.☒ Assignee of record of the entire interest. See 37 CFR 3.71.

Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

## SIGNATURE of Applicant or Assignee of Record

Name

Peter Chen, Esq./Vice President Of Intellectual Property, Assoc. General Counsel

Signature

Peter Chen

Date

Oct. 16, 2002

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

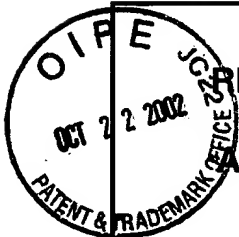
3 \*Total of 3 forms are submitted.

Please type a plus sign (+) inside this box ☒

PTO/SB/82 (10-00)

Approved for use through 10/31/2002. OMB 0651-0035

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# REVOCATION OF POWER OF ATTORNEY OR AUTHORIZATION OF AGENT

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| Examiner Name          | Not Yet Assigned        |
| Attorney Docket Number | 706316-1206             |

I hereby revoke all previous powers of attorney or authorizations of agent given in the above-identified application:

☒ A Power of Attorney or Authorization of Agent is submitted herewith.

OR

☐ Please change the correspondence address for the above-identified application to:

☐ Customer Number



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I am the:

☐ Applicant/Inventors.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

## SIGNATURE of Applicant or Assignee of Record

Name

Peter Chen/Vice President Of Intellectual Property, Assoc. General Counsel

Signature

*Peter Chen*

Date

OCT. 16, 2002

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☐ \*Total of 3 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

O.I.P.E. JC22-3131  
OCT 22 2002  
PATENT & TRADEMARK OFFICE

PTO/SB/96 (08-00)  
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STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Quickturn Design Systems, Inc.  
 Application No./Patent Nos.: 09/656,146 Filed/Issue Dates: September 6, 2000  
 Entitled: High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors With Improved Multiplexed Data Memory

QUICKTURN DESIGN SYSTEMS, INC. a Corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:  
 1. ☒ the assignee of the entire right, title, and interest; or  
 2. ☐ an assignee of less than the entire right, title and interest.  
 The extent (by, percentage) of its ownership interest is \_\_\_\_\_ %

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in the patent application/patent identified above by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_, Frame \_\_ or for which a copy thereof is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: William F. Beausoleil, Brian Cook, Tak-Kwong Ng; Helmut Roth; Peter Tannenbaum, Lawrence A. Thomas and Norton J. Tomassetti

To: International Business Machines Corporation  
 The document was recorded in the United States Patent and Trademark Office at Reel 011145, Frame 0220 or for which a copy thereof is attached.

2. From: International Business Machines Corporation To Cadence Design Systems, Inc. A copy of a document evidencing this assignment is being recorded herewith . A copy of this document is attached as Exhibit 1.

3. From: Cadence Design Systems, Inc. To: Quickturn Design Systems, Inc. A copy of a document evidencing this assignment is being recorded herewith . A copy of this document is attached as Exhibit 2.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Oct. 16 2002  
Date

Peter Chen, Esq.  
 \_\_\_\_\_  
 Typed or printed name  
 \_\_\_\_\_  
 Signature

Vice President Of Intellectual Property, Assoc. General Counsel  
Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

DOCSSV1:208124.1  
706316-1206 R1H

## NOTICE OF PATENT ASSIGNMENT

This **NOTICE OF PATENT ASSIGNMENT** (the "Notice") is executed as of the date below, by **INTERNATIONAL BUSINESS MACHINES CORPORATION**, a New York corporation ("IBM").

**WHEREAS**, IBM has entered into a "Patent Assignment Agreement" (the "Agreement") with **CADENCE DESIGN SYSTEMS, INC.**, a Delaware corporation ("CADENCE"), dated February 27, 2002 ("Effective Date"), pursuant to which IBM has agreed to, among other things, assign to CADENCE certain United States patents.

**WHEREAS**, IBM and CADENCE wish to evidence the assignment of such patent rights made in the Agreement with this document.

NOW, THEREFORE, for good and valuable consideration, IBM agrees as follows:

### **ARTICLE I IBM PATENTS**

"IBM Patents" shall mean the patent applications listed in Attachment A.

### **ARTICLE II ASSIGNMENTS**

Effective on the Effective Date, and subject to the terms and conditions of the Agreement, including certain reserved rights, IBM has assigned, transferred and conveyed to CADENCE all of IBM's right, title and interest in the IBM Patents.

**IN WITNESS WHEREOF**, IBM has caused this Notice to be executed.

**INTERNATIONAL BUSINESS MACHINES CORPORATION**

By: 

Gerald Rosenthal

Vice President, Intellectual Property and Licensing

Date: March 8, 2002

**ATTACHMENT A TO IBM PATENT ASSIGNMENT ACKNOWLEDGEMENT**

09/655,596

09/656,541

09/193,733

09/523,053

09/656,146

09/373,125

09/655,595

09/656,147

09/796,055

09/522,354

## ASSIGNMENT OF PATENT APPLICATIONS

Whereas, CADENCE DESIGN SYSTEMS, INC., a corporation organized and existing under and by virtue of the laws of the Delaware and having its place of business at 2655 Seely Avenue, San Jose, California 94134 ("CADENCE"), owns of all right, title and interest in the inventions claimed and/or disclosed in following United States Patent Applications ("the Patent Applications"):

| Patent Application Number | Date Patent Application Filed | Inventors               | Title   |
|---------------------------|-------------------------------|-------------------------|---|
| 09/655,596                | 09-06-00                      | Beausoleil, W.F., et al | High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with a Method to Allow Memory Read/Writes Without Interrupting the Emulation                       |
| 09/656,541                | 09-06-00                      | Beausoleil, W.F., et al | High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with a Method to High Speed Bulk Read/Write Operation Synchronous DRAM While Refreshing the Memory |
| 09/193,733                | 11-17-98                      | Ruedinger, J.           | Algorithm to Separate Clock Domains for Emulation Purposes  |
| 09/523,053                | 03-10-00                      | Ruedinger, J., et al    | Methods to Improve Concurrent Behavior Modeling with Emulation  |
| 09/656,146                | 09-06-00                      | Beausoleil, W.F., et al | High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with   |

|            |          |                         |  |
|------------|----------|-------------------------|--|
|            |          |                         | Improved Multiplexed Data Memory   |
| 09/373,125 | 08-12-99 | Beausoleil, W.F., et al | Clustered Processors in an Emulation Engine  |
| 09/655,595 | 09/06/00 | Beausoleil, W.F., et al | High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with an Improved Board-to-Board Interconnection Cable |
| 09/656,147 | 09/06/00 | Beausoleil, W.F., et al | High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with an Improved Maintenance Bus that Streams Data    |
| 09/796,055 | 02-28-00 | Beausoleil, W.F., et al | High Bandwidth 3D Memory Packaging Technique   |
| 09/522,354 | 03-09-00 | Musselman, R., et al    | Non-synchronous Hardware Emulator  |

Whereas QUICKTURN DESIGN SYSTEMS, INC., a corporation organized and existing under and by virtue of the laws of the Delaware and having its place of business at 2655 Seely Avenue, San Jose, California 94134 ("QUICKTURN"), is desirous of acquiring the entire right, title and interest in the inventions claimed and/or disclosed in the Patent Applications;

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, CADENCE hereby sells, assigns, transfers and sets over unto QUICKTURN, its successors and assigns, the full and exclusive right, title and interest to the inventions claimed and/or disclosed in the Patent Applications and to all Letters Patent or application or similar legal protection, not only in the United States and its territorial possessions, but in all countries foreign thereto to be obtained for the inventions claimed and/or disclosed in the Patent Applications, and to any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in the United States or a foreign country for the full term or terms for which the same may be granted, including all priority rights under the International Convention; the Patents to be held and enjoyed by QUICKTURN for its own use and behalf, and for QUICKTURN'S legal

representatives and assigns, to the full end of the term for which any Letters Patents are granted, as fully and entirely as the same would have been held by CADENCE had this assignment and sale not been made. CADENCE hereby authorizes and requests the United States Commissioner of Patents and Trademarks and any officials of foreign countries whose duty it is to issue patents or any legal equivalent thereof to QUICKTURN, its successors and assigns, in accordance with this Assignment.

Executed this 22nd day of April, 2002, at  
San Jose, CA

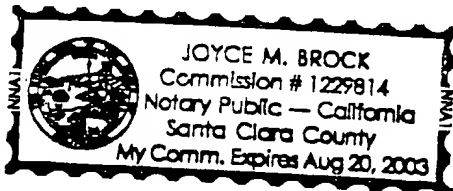
R.L. Smith McKeithen  
R.L. Smith McKeithen  
Secretary, CADENCE DESIGN SYSTEMS, INC.

STATE OF CALIFORNIA )  
 ) ss

COUNTY OF SANTA CLARA )

On 4/22/02 before me, Joyce M. Brock, personally appeared  
R.L. Smith McKeithen ☒ personally known to me - OR - ☐ proved to me on the basis  
of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within  
instrument and acknowledged to me that he/~~she~~/~~they~~ executed the same in his/~~her~~/~~their~~  
authorized capacity(~~ies~~), and that by his/~~her~~/~~their~~ signature(~~s~~) on the instrument the person(s), or  
the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Joyce M. Brock  
Notary Public in and for said County and State